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EXAMINER

STEVENS, THOMAS H

ART UNIT PAPER NUMBER

2123

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/785,208

**Applicant(s)**

NAGAKURA, MASAHIRO

**Examiner**

Thomas H. Stevens

**Art Unit**

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-24 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

PD

### **DETAILED ACTION**

1. Claims 1-24 were examined.

#### ***Section I: Final Rejection (3<sup>rd</sup> Office Action)***

##### ***Specification Objection***

2. The amendment filed on 23 June 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: *As used hereafter, the term load refers to a mechanical load such as external force or a temperature.*

Applicant is required to cancel the new matter in the reply to this Office Action.

##### ***Claim Rejections - 35 USC § 112***

3. Claims 1,5 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Summarily, the limitations detailing "mechanical load" were not disclosed within the original disclosure.

##### ***Claim Rejections - 35 USC § 103***

4. Claims 1-12 were rejected under 35 U.S.C. 103 (a) as obvious by Taghavi et al., (U.S. Patent 5,453,934 (1995)) in view of Rui et al., (A Review of ANN-based short-

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term load Forecasting (1995)), and in further view of Rebellow et al., (U.S. Patent 6,430,455 (2002)). Taghavi teaches an improved method for design and testing using a CAD system for incorporating the automatic production of block structured hexahedral grid (abstract) used in mechanical loads (column 1, lines 13-15) by way of numerical analysis or simulation (column 1, lines 30-59); but doesn't teach load forecasting nor managing current data files. Rui et al. teaches neural networks and load forecasting while Rebellow et al. teaches an article for managing current files on numerical analysis.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Taghavi by way of Rui and Rebellow et al. to provide a method for managing current files of a product at the time of release (Rebellow: column 1, lines 60-63) and to improve long computational time (Rui: pg.1, left column, Introduction, 2<sup>nd</sup> paragraph).

Claim 1. A computer-readable recording medium recorded with a numerical analysis program (Rebello: column 4, line 65): a master model creating function for creating a master model representing (Rebello: column 2, lines 45-50) a shape of an object, a load region data creating function for creating load region data (Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is)) for specifying a load applying region in said master model, the load applying region being a portion of the master model to which a load will be applied, the load being a mechanical load (Taghavi:column 1, lines 13-15) and an analytic model generating function for generating an analytic model where the load region data

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created by said load region data creating function is added to the master model created by said master model creating function (Rebello: columns 2-3 lines 65-67 and 1-16 with figures 2 and 3 (element 24 in particular)).

Claim 2. A computer-readable recording medium recorded with a numerical analysis program according to claim 1, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said numerical analysis program further comprises a load attribute setting function for setting up a load attribute for the load applying region specified by said load region data, (Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is)) and said analytic model generating function, when a load attribute (Rui: pg. 2 and 3 right column, Input Variables of BP Network section, 6<sup>th</sup> paragraph and 1<sup>st</sup> paragraphs, respectively) has been set up by said load attribute setting function, generates an analytic model with the load attribute added.

Claim 3. A computer-readable recording medium recorded with a numerical analysis program according to claim 1, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said load region data creating function sets up the load applying region by projecting an optional shape (Rebello: column 1, lines 10-19) surface onto the master model (Rebello: column 2, lines 45-50).

Claim 4. A computer-readable recording medium recorded with a numerical analysis program according to claim 3, Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said load region data creating function designates a projection direction of the optional shape (Rebello: column 1, lines 10-19) surface with respect to said master model by a vector.

Claim 5. A numerical analysis system comprising (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))): master model creating means for creating a master model representing a shape of an object, load region data creating means for creating load region data for specifying a load applying region in said master model, the load applying region being a portion of the master model to which a load will be applied, the load being a mechanical load (Taghavi:column 1, lines 13-15) and analytic model (Rebello: columns 1 and 2, lines 40-45 and 45-50, respectively) generating means for generating an analytic model where the load region data created by said load region data creating means is added to the master model created by said master model (Rebello: column 2, lines 45-50) creating means.

Claim 6. A numerical analysis system according to claim 5 (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner

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interprets element 24 is where the load data is))) wherein said numerical analysis system further comprises load attribute setting means for setting up a load attribute for the load applying region specified by said load region data (Rui: pg. 2 and 3 right column, Input Variables of BP Network section, 6<sup>th</sup> paragraph and 1<sup>st</sup> paragraphs, respectively), and said analytic model generating means, when a load attribute has been set up by said load attribute setting means, generates an analytic model with the load attribute added.

Claim 7. A numerical analysis system according to claim 5, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said load region data creating means sets up the load applying region by projecting an optional shape (Rebello: column 1, lines 10-19) surface onto the master model.

Claim 8. A numerical analysis system according to claim 7, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said load region data creating means designates a projection direction (Rebello: figure 1 with column 2, lines 25-37) of the optional shape surface with respect to said master model by a vector.

Claim 9. A numerical analysis method comprising (Rebello: column 4, line 65): a master model-creating step for creating a master model representing (Rebello: column 2, lines

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45-50) a shape of an object, a load region data creating step for creating load region data for specifying a load applying region in said master model, the load applying region being a portion of the master model to which a load will be applied, the load being a mechanical load (Taghavi:column 1, lines 13-15) and an analytic model generating step for generating an analytic model where the load region data (Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is)) created by said load region data creating step is added to the master model created by said master model creating step.

Claim 10. A numerical analysis method according to claim 9, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said numerical analysis method further comprises a load attribute setting step for setting up a load attribute for the load applying region specified by said load region data (Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is)), and said analytic model generating step, when a load attribute has been set up by said load attribute setting step, generates an analytic model with the load attribute added.

Claim 11. A numerical analysis method according to claim 9, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said load region



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data creating step sets up the load applying region by projecting an optional shape (Rebello: column 1, lines 10-19) surface onto the master model.

Claim 12. A numerical analysis method according to claim 11, (Rebello: column 4, line 65; Rui: pg. 2, left column 1 paragraph with Rebello: column 2, lines 45-52 (note: examiner interprets element 24 is where the load data is))) wherein said load region data creating step designates a projection direction of the optional shape (Rebello: column 1, lines 10-19) surface with respect to said master model by a vector.

### ***Section II: Response to Arguments (2<sup>nd</sup> Office Action)***

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

To add, applicants state Rebellow's lack of teaching of specifying a portion of the master model (applicants' response, page 7, 1<sup>st</sup> paragraph). Rebellow teaches a function—a data extractor (column 5, lines 5-22) in which the "*populator 36 extracts data from master model version 1.0 and populates it into the drawing file 24 and an NC machining data file 26. A time stamp log 42 in the version control system 34 records each time stamp assigned for the drawing file 24 and the NC machining data file. The*

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*file 26. A time stamp log 42 in the version control system 34 records each time stamp assigned for the drawing file 24 and the NC machining data file. **The version control system 34 compares the contents of the current version of the drawing files and NC data files already in the version control system with the newly populated version. If differences do exist, then the version control system 34 stores the new version of the files and assigns a time stamp thereto to indicate the time and date. If there is no difference in the contents between the versions, then the version control system 34 maintains the current version.** The version control system 34 puts dependency information from the drawing file 24 and the NC data file 26 into the dependency model 38. When it comes time to release the drawing file 24 and NC data file 26 to manufacturing, the release unit 40 determines if the files being released are current in the above-described manner."*

In this instance the data extract function knows which pieces of data to extract from the master model (highlight emphasized).

Applicants' argument of the prior art of Rui et al. as being "*nonanalogous by which the art does not pertain to the problems addressed in the claim invention*" (applicants' arguments, pg.7, 2<sup>nd</sup> paragraph) is non-persuasive. MPEP 2145, Section IX:

A prior art reference is analogous if the reference is in the field of applicant's endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

To add, Rui does discuss problems with load time (Rui: Introduction, left column, 2<sup>nd</sup> paragraph) with the fact the data changes randomly (Rui: pg.2, left column, "Selection of Training Set", lines 8-15).

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Rejection stands.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

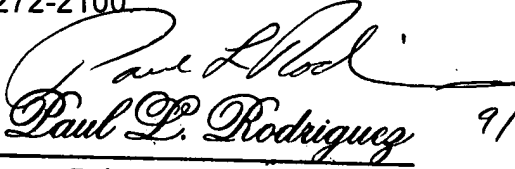
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Leo Picard at (571) 272-3749. Central Fax number is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100

THS

  
Paul L. Rodriguez 9/1/05  
Primary Examiner  
Art Unit 2125